

Further Interesting Bird Records from the Gulf of Carpentaria and Arnhem Land

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Introduction

The Gulf of Carpentaria region has a comparatively long ornithological history, with a number of collectors working in the region of Borroloola (Hill 1913; Barnard 1914a), the Roper River mouth (Bennett 1983) and the Barkly Tablelands (Ingram 1907; Barnard 1914b) early this century. More recently, biological survey work has been undertaken near Borroloola by the CSIRO Division of Wildlife Research (Schodde 1976), and throughout the region from 1976 to 1981 by the Royal Australasian Ornithologists Union, as part of the Australia-wide Atlas of birds (Blakers *et al.* 1984).

Arnhem Land's ornithological history began even earlier; notably with John Gilbert's work near Port Essington in 1841 (Campbell 1919). Collecting and observing trips subsequently have been made to the Arnhem Land region by Baldwin Spencer in 1912 (Whittell 1954); William McLennan in 1915-16 (White 1917); Norman Tindale in 1921-22 (Tindale 1925a, 1925b); the American-Australian Scientific Expedition in 1948 (Deignan 1964); CSIRO in 1961 (Frith & Hitchcock 1974); the Harold Hall Expedition of 1968 (Hall 1974); and the RAOU (Bennett 1983; Blakers *et al.* 1984).

Notwithstanding these bird collecting and bird observing surveys, the distribution and dispersal of birds in the Gulf of Carpentaria and Arnhem Land regions remains poorly known. For example, a recent paper by Holmes and Noske (1990) documented range extensions for 17 species of bird in those two regions, and reported one species, Spinifexbird *Eremiornis carteri*, not previously known from the Gulf.

Here we report some further extensions of range, or records of interest, for 20 bird species recorded in the Gulf or Arnhem Land regions during surveys conducted by the Conservation Commission of the Northern Territory (CCNT), or incidentally by other observers. Observations were mostly made during the Gulf Region Fauna Survey (1984-1988), a CCNT fauna survey of monsoon vine forests in the Northern

Territory between April and September, 1990, or by John and Judy Whitaker while living at Borroloola. Some additional incidental observations held in the public database of the Biological Records Scheme (BRS) of the CCNT are also included. Nomenclature follows Blakers *et al.* (1984). Latitudes and longitudes of all locations are given in Appendix 1.

Annotated List of Species

LEAST FRIGATEBIRD *Fregata ariel*

- Borroloola, 1 bird, March 1985, picked up by John and Judy Whitaker following Cyclone Sandy.

Not recorded by Schodde (1976).

PACIFIC BAZA *Aviceda subcristata*

- Trig Hill, near Borroloola, 1 bird seen by John Whitaker, May 1984, over a small waterhole north of Trig Hill.
- Beetle Springs, McArthur River Station, 1 bird, 8-5-90, over *Melaleuca*-lined watercourse in sandstone escarpment.

Blakers *et al.* (1984) comment that few records of this species exist from the Gulf of Carpentaria region. Recorded only once by Schodde (1976); two birds along the McArthur River, May 1976.

RED-CHESTED BUTTON-QUAIL *Turnix pyrrhothorax*

- 100 km W. of Nhulunbuy, 3 birds, 29-7-90, in dense 0.5 m high grass in damp grassy flat beneath *Eucalyptus oligantha* woodland.
- 50 km S. of Ramingining, 2 birds, 4-8-90, in *E. miniata/tetradonta* woodland with a 1 m high *Sorghum* spp. understorey. Restricted to unburnt grass patches; not observed in burnt patches. Groups of Chestnut-backed Button-quail *T. castanota* at the site were observed in recently burnt woodland without any grass cover and in nearby vine thickets; not recorded feeding in either of these cases.

Both records extend the eastern range of Red-chested Button-quail in Arnhem Land (Blakers *et al.* 1984) and supplement other dry season records from northwestern Australia (McKean 1985; Jaensch 1989; Woinarski 1990).

BAILLON'S CRAKE *Porzana pusilla*

- Little Fletcher Swamp, near Borroloola, 1 bird seen by John and Judy Whitaker, September 1985.

First known record for the region (Schodde 1976; Blakers *et al.* 1984).

DUSKY MOORHEN *Gallinula tenebrosa*

- Little River, near Cape Crawford, on Carpentaria Highway, 2 birds, August 1976, seen by Hilary Thompson.
- Calvert River, just below the Gulf Highway crossing, 1 bird, 29-9-86, along edge of permanent waterhole.

First known records for the Gulf region, although this species has been reported to be moving westwards in recent times (Blakers *et al.* 1984). More recently recorded from just south of Borrooloola (16°37'S, 136°19'E), 12-4-88, and 10 km south-east of mouth of Calvert River (16°21'S, 137°46'E), 21-3-90 (BRS).



PLATE 1 Hooded Parrot at nest (J. Estbergs)

PAINTED SNIPE *Rostratula benghalensis*

- Bauhinia Downs station, 1 bird, 29-8-85, flushed several times by Gerry O'Neill and Mike Fleming from the edge of a small paperbark swamp located on top of a sandstone plateau.

First known record for Gulf region (BRS; Storr 1977; Blakers *et al.* 1984). Only previously published Top End record from Victoria River Downs (Boekel 1980).

INLAND DOTTEREL *Peltolyas australis*

- 7 km north of Borrooloola, 1 bird, 28-5-85, seen by John Whitaker in wet grassland.
- 80 km N. of Barkly Homestead on Tablelands Highway (19°00'S, 136°00'E), 14 birds, 20-11-90, cracked clay plains with sparse tussock grass.

Northern extension of range (Storr 1977; Blakers *et al.* 1984). Not recorded on Barkly Tablelands by Ingram (1907), Hill (1913) or Barnard (1914a).

RED-NECKED AVOCET *Recurvirostra novaehollandiae*

- 5 km west of the mouth of Robinson River, a large flock of birds, 21-4-88, flushed from saline flats during an aerial survey.

First known record for the Gulf region (Storr 1977; Schodde 1976; Blakers *et al.* 1984), although its apparent absence may simply reflect the difficulties of access to the saline coastal flats. Recent sightings in the Queensland section of the Gulf (Claridge & Johnson 1988) would support this contention.

ROSE-CROWNED FRUIT-DOVE *Ptilinopus regina*

- Manangoora Station, 1 bird, December 1982. Seen by Brian Walsh (BRS).
- Bauhinia Station, 1 bird, 1-6-89, in closed forest adjacent to a large waterhole. Observed by Bill Lowe and Else Foster (BRS).
- East of Calvert River, Gulf of Carpentaria, 1 bird, 30-5-90, feeding in *Ficus virens* in coastal vine thicket.
- Annie Creek, south Arnhem Land, 1 bird, 13-7-90, in evergreen rainforest.

The first three records all extend the fruit-dove's known distribution in the NT; eastern limit previously considered to be Port Bradshaw (12°30'S, 136°40'E) and Sir Edward Pellew group of Islands (15°35'S, 136°40'E) (Schodde 1976; Storr 1977; Blakers *et al.* 1984). The latter record is at the edge of the species' distribution in the Arnhem Land interior (Blakers *et al.* 1984).

HOODED PARROT *Psephotus dissimilis*

- 50 km S. of Ramingining, northern Arnhem Land, 5 birds in one flock and occasional other pairs seen, 3-8-90. Habitat is open *Eucalyptus miniata*, *E. tetradonta*, *E. bleeseri* woodland with *Sorghum* spp. understorey.

Although recorded from this region previously (Blakers *et al.* 1984), the vulnerable status of this species (Brouwer & Garnett 1990) warrants continued recording of its presence at known sites.

RUFOUS OWL *Ninox rufa*

- Echo Gorge, Wologorang Station, 1 bird, 29-3-86, in sandstone jungle gorge off Echo Gorge.
- Annie Creek, 1 bird observed and heard, 13-7-90, in evergreen rainforest along the creek.
- 50 km S. of Ramingining, 1 flushed from vine thicket with tall canopy cover.

The Echo Gorge sighting is the first confirmed record for the Gulf region. Barnard (1914a) flushed what he considered to be a pair of Rufous Owls from along the Macarthur River, but was not certain. The latter two records help define the distribution of the species in Arnhem Land (Blakers *et al.* 1984; Holmes & Noske 1990).

MASKED OWL *Tyto novae-hollandiae*

- 100 km W. of Nhulunbuy, eastern Arnhem Land, 1 bird, 22-7-90, heard calling from tall *Eucalyptus tetradonta* forest along a ridge with sparse shrub understorey, scattered vine thickets on slopes. Calls later compared with tapes of Masked Owl and Barn Owl *T. alba* calls to corroborate identification.

There are few records of this species from northern Australia, although Arnhem Land may be a stronghold (Blakers *et al.* 1984). The status of this species is unclear (Blakers *et al.* 1984); Storr (1977) described it as scarce.

RAINBOW PITTA *Pitta iris*

- Annie Creek, 2 birds, 13-7-90, in evergreen rainforest along the creek.

Slight inland range extension within Arnhem Land.

VARIED TRILLER *Lalage leucomela*

- Broadmere Lagoon, 1 bird, 24-5-89, seen by Bill Lowe in eucalypt woodland adjacent to lagoon (BRS).

First confirmed record from the southern Gulf region (Blakers *et al.* 1984).

LITTLE SHRIKE-THRUSH *Colluricincla megarhyncha*

- Alligator Waterhole, Bauhinia Downs Station, 1 bird, 1-6-89, seen by Bill Lowe in patch of rainforest adjoining waterhole (BRS).
- Mouth of Calvert River, 2 birds, 5-6-87, in mangroves adjacent to tidal flats.
- Echo Gorge, Wollogorang Station, 1 bird, 22-9-86, at entrance to Banyan Gorge.

Based on habitat, the latter bird may belong to the Queensland subspecies *C. m. parvissima* (Ford 1979), rather than the lower McArthur River subspecies *C. m. aelptes* (Schodde & Mason 1976; Ford 1979), providing a closer link between the eastern and western populations of this species. The coastal record extends the species' known distribution in the Northern Territory; previously considered to be the mouth of the Macarthur River (Schodde 1976; Schodde & Mason 1976).

MANGROVE GOLDEN WHISTLER *Pachycephala melanura*

- Mouth of Calvert River, 1 bird, 5-6-87, in low monsoon forest on a coastal dune.
- East of Calvert River, 1 female or young male, 31-5-90, in coastal vine thicket close to mangrove patch.

Extends known range of this species in the NT eastwards; eastern limits within NT previously given as the Lower McArthur River and Groote Eylandt (14°00'S, 136°40'E) (Storr 1977); the westernmost records from Qld are from the Burketown region (17°00'S, 139°30'E) (Blakers *et al.* 1984).

SHRIKE-TIT *Falcoeneculus frontatus*

- 50 km S. of Ramingining, 2 birds, 6.8.90, in *Eucalyptus miniata*, *E. tetradonta*, *E. bleeseri* woodland with *Sorghum* spp. understorey. Observed feeding on bark of each of these three tree species, as well as the bark of one dead tree. Not heard calling, and not recorded on other days.

This record significantly extends the known range of the shrike-tit; previously known mostly from localities further south between Pine Creek and Larrimah (Storr 1977; Robinson & Woinarski 1992). Appears to comprise the 28th known record of this sub-species (Robinson & Woinarski 1992).

RUFIOUS FANTAIL *Rhipidura rufifrons dryas*

- Blackfella Springs, 3 birds, 29-9-86, in dense stand of *Melaleuca* spp., and along edges of creek.
- Calvert River, just below Gulf Highway crossing, 1 bird, 29-9-86, in deep gully.

- Echo Gorge, Wollogorang Station, 1 bird, 23-9-86, in dense growth in Banyan Gorge.
- Mouth of Calvert River, 1 bird, 5-6-87, in low, coastal vine thicket.
- East of Calvert River, 1 bird, 31-5-90, in coastal vine thicket adjoining mangrove patch.

These records all extend the known distribution of this species along the coast and sub-coastal region of the Gulf of Carpentaria; eastern limits within NT previously given as the Lower McArthur River (Schodde 1976; Storr 1977); within Qld, the western limits were previously given as near Karumba (17°29'S, 140°50'E; Blakers *et al.* 1984).



PLATE 2 Little Shrike-thrush at nest (J. Estbergs)

BLACK HONEYEATER *Certhionyx niger*

- Caranbirini Waterhole, 1 bird, 5-9-85, feeding on flowering *Melaleuca* spp.
- McDermott's Springs, Gulf of Carpentaria, 2 birds, 4-6-90, in woodland of flowering *Eucalyptus miniata*. Many (c. 50) Grey-fronted Honeyeaters *Lichenostomus plumulus* also present.

These records are at the northern edge of this species' distribution in the Gulf of Carpentaria (Blakers *et al.* 1984).

PIED HONEYEATER *Certhionyx variegatus*

- Benmara Station, many birds, 2-6-87, feeding on flowering *Grevillea pteridifolia* in heathland.

This represents only the second known record for this species in the Gulf region. One was seen previously by Joan Paton at Billengarrah Station (16°18'S, 135°43'E), 28-7-85, in open woodland (BRS).

Discussion

The records listed above include observations of five species previously unknown from the Gulf of Carpentaria region (Baillon's Crake, Dusky Moorhen, Painted Snipe, Varied Triller and Pied Honeyeater), and one species recorded only once previously (Red-necked Avocet). Also of interest was the record of the Shrike-tit from near Ramingining, a range extension of approximately 160 km and the first known record of this species from the Arnhem Land region (Robinson & Woinarski 1992). These records highlight the dearth of basic biological information for many bird species in northern Australia, and indicate how little we still know about their distributions and broad habitat needs.

The records also highlight how little we know of seasonal patterns of movement in northwestern Australia. For example, do Black and Pied Honeyeaters regularly move north in the winter to feed on flowering eucalypts and Grevilleas, or is it an irregular event? Do Pacific Bazaes regularly visit the Gulf in winter, and if so, from where? Where do Red-chested Button-quails move to during the wet season? What are the origins of the Rose-crowned Fruit-doves, Mangrove Golden Whistlers, Little Shrike-thrushes and Rufous Fantails seen east of Calvert River and elsewhere in the Gulf: are they sedentary, or have they dispersed from along the coast, either from further east or further west?

The arid interior at the base of the Gulf of Carpentaria has long been recognised as an important zoogeographic barrier (Spencer 1896; Keast 1961), preventing dispersal between northwestern and northeastern populations of many tropical, rainforest and woodland species (Keast 1961; Ford 1982; Russell-Smith & Dunlop 1987). The records of Rose-crowned Fruit-dove, Little Shrike-thrush, Mangrove Golden Whistler and Rufous Fantail from east of the MacArthur River in the Gulf region suggest that individuals of some rainforest species may be able to disperse between the north-eastern and north-western rainforest refugia, and that some gene flow may occur along the coastal vine thicket fringe. Conversely, individuals of most other rainforest species restricted in Australia to the Top End, Kimberleys and eastern States (e.g. Orange-footed Scrubfowl *Megapodius reinwardt*, Rainbow Pitta, Varied Triller, Grey Whistler *Pachycephala simplex*, Dusky Honeyeater *Myzomela obscura* and Figbird *Sphecothebes viridis*) were absent from the Calvert River and McArthur River districts (this study; Schodde 1976), implying that the arid hinterland of the Gulf of Carpentaria does effectively prevent dispersal of many rainforest birds. The absence of these species from isolated patches of rainforest habitat in the Gulf region implies furthermore that rainforest-dependent birds may be vulnerable to habitat loss in northern Australia (see Smith & Johnstone 1977; Bennett 1983; Brooker *et al.* 1990), in part due to poor dispersal abilities across unsuitable habitats. This implication is significant in that most rainforest patches in the Northern Territory are small and isolated, many of them degraded or threatened by grazing and fire (Bennett 1983; Brooker *et al.* 1990; Russell-Smith & Bowman 1992).

It is symbolic of our knowledge of the avifauna in northwestern Australia that the most detailed accounts of many bird species' distributions, habitats and habits continue to be based on information collected last century and early this century

(e.g. Ingram 1907; Hill 1913; Barnard 1914a, 1914b; Mathews 1914; White 1917; Campbell 1919). However, the status of many bird species has changed since these early expeditions (Blakers *et al.* 1984), notably due to extensive habitat modification through grazing and fire (Blakers *et al.* 1984). Much more information is needed on species' current distributions, dispersal patterns and ecological needs in northwestern Australia. Only with that knowledge can we begin to make recommendations for bird species conservation.

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APPENDIX 1 Latitudes and longitudes of localities mentioned in text

Alligator Waterhole	(16°05'S, 135°22'E)	Echo Gorge, Wollgorang Station	(17°11'S, 137°41'E)
Annie Creek	(13°02'S, 134°56'E)	Little Fletcher Swamp	(16°01'S, 136°30'E)
Barkly Homestead, 80 km N.	(19°00'S, 136°00'E)	Macarthur River, mouth	(15°50'S, 136°40'E)
Bauhinia Downs stn.	(15°55'S, 135°09'E)	McDermott's Springs	(17°25'S, 137°48'E)
Beetle Springs	(16°47'S, 135°59'E)	Manangoora Station	(16°01'S, 136°51'E)
Benmara Station	(17°36'S, 136°51'E)	Nhulunbuy, 100 km W.	(12°36'S, 136°32'E)
Blackfella Springs	(17°19'S, 137°03'E)	Ramingining, 50 km S.	(12°38'S, 134°49'E)
Borroloola, 7 km N.	(16°06'S, 136°17'E)	Robinson R, 5 km W. of mouth	(16°02'S, 137°13'E)
Broadmere Lagoon	(16°26'S, 135°12'E)	Trig Hill	(16°02'S, 136°18'E)
Calvert R, East	(16°27'S, 137°53'E)		
Calvert R, mouth	(16°16'S, 137°43'E)		
Calvert R/ Gulf Hwy crossing	(16°55'S, 137°21'E)		
Cape Crawford	(16°39'S, 135°47'E)		
Caranbirini Waterhole	(16°16'S, 136°05'E)		